

USSR

UDC 669.15.018.295:538.5

GRUZIN, P. L., RODIONOV, YU. L., LI, YU. A., YEDNERAL, A. F., ZHUKOV, O. P.,
and PERKAS, M. D., Institute of Metal Science and Physics of Metals, Central
Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin

"Redistribution of Alloying Elements Upon Recovery in Martensite-Aging
Alloys Fe-Ni-Mo and Fe-Ni-Co-Mo"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 36, No 2, 1973,
pp 423-427

Abstract: In order to determine the reasons for differences in the
nature of change of recovery of the alloys N16M5 and N16K15MS at various
temperatures, the phenomenon was studied by nuclear γ -resonance (NGR).
The composition of the alloys is as follows: N16M5--16 wt.% Ni, 5Mo;
N16K15MS--16.4% Ni, 5.25% Mo, 15.1% Co, remainder Fe in both cases.
Low temperature aging was at 420° C for 8-100 hours; the recovery tem-
perature was 100° C higher. It was found that cobalt has a significant
influence on the processes of redistribution of alloy-element atoms dur-
ing recovery. The degree of recovery in alloys with cobalt increases,
apparently as a result of decomposition of metastable segregations at
low temperatures.

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USSR

UDC 659.24'15'292.538.22

GRUZIN, P. L., RODIONOV, YU. L., and MKRTCHYAN, V. S., Institute of Metal Science and Physics of Metals of the Central Scientific Research Institute of Ferrous Metallurgy

"Redistribution of Vanadium Atoms in Iron-Nickel Permalloys"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 34, No 4, 1972, pp 878-879

Abstract: The Ni-15Fe-13V alloy was enriched with Fe-57 isotope (up to 18%) in order to make the nuclear gamma resonance (NGR) method more sensitive. The Mossbauer spectrometer was used in the experiments. All samples were 20-40 μ m thick, the annealing of which was carried out at 450-500°C. Changes in V atoms concentration was judged from alternations of the superfine magnetic field (H_{sup}). Increase of H_{sup} for Ni₃(Fe, V) alloy after annealing was ~ 40 koersted compared with hardened samples. This increase in H_{sup} corresponded to a decrease in the number of V atoms around Fe atoms which in this case amounted to $\sim 20\%$. The value of H_{sup} for deformed Ni₃(Fe, V) samples was lower by approximately 20 koersted in comparison with hardened. This means that V atoms move away from Fe atoms during annealing. the redistribution of
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GRUZIN, P. L., et al., Fizika Metallov i Metallovedeniye, Vol 34, No 4, 1972, pp 878-879

V atoms during low-temperature annealing (450-500°C) was lower for deformed samples compared with the hardened samples.

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USSR

UDC: 539.2+621.039.8

GRUZIN, P. L., RODIONOV, Yu. L., MKRTCHYAN, V. S., LI, Yu. A.

"Study of the Effect of Cobalt on the Redistribution of Alloy Element Atoms in Iron-based Alloys by the NGR Method"

Moscow, Doklady Akademii Nauk SSSR, Vol 204, No 2, 1972, pp 328-331.

Abstract: Cobalt as an alloying element has a significant influence on the physical and mechanical properties of alloys. However, there is no unified opinion at present concerning the relative role of cobalt in changing the properties of alloys. This work studied the influence of cobalt on the redistribution of atoms of alloying elements in submicrovolumes of iron-based alloys by the method of nuclear gamma resonance (NGR). Alloys studied included Fe-12Co; Fe-16Ni-5,6Co; Fe-16Ni-10Co; Fe-16Ni-15Co; Fe-16Ni-15Co-5Mo; Fe-16Ni-15Co-10Mo; Fe-18Ni-10Co-10W.

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GURZIN, P. L., RODIONOV, Yu. L., MKRTCHYAN, V. V., LI, Yu. A., Moscow, Doklady Akademii Nauk SSSR, Vol 204, No 2, 1972, pp 328-331.

The influence of hardening and subsequent tempering at 400-500°C on the resonance spectra was studied for the alloy Fe-16Ni. The study showed that in the early stages of tempering of iron-cobalt at 400-500°C, the atoms of cobalt are redistributed, resulting in an increase in the number of cobalt atoms in the immediate neighborhood of the iron; the molybdenum and tungsten atoms move away from the iron atoms in the solid solution. In later stages of tempering, the phases Fe_2Mo and Fe_2W are formed. Establishment of close order of iron and cobalt atoms retards the processes leading to the separation of phases such as Fe_2Mo .

2/2

1/2 029

UNCLASSIFIED

PROCESSING DATE--18SEP70

TITLE--EYE SEMIOTICS IN THE ACUTE PERIOD OF A CLOSED CEREBROCRANIAL INJURY

AUTHOR--RODIONOV, YU.M.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK OPTAL'MOLOGII, 1970, NR 2, PP 64-68

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BRAIN, INJURY, EYE, VISION, OPHTHALMOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0675

STEP NO--UR/0357/70/000/002/0064/0068

CIRC ACCESSION NO--AP0102659

UNCLASSIFIED

2/2 029
CIRC/ACCESSION NO--AP0102659
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--18SEP70

ABSTRACT. OPHTHALMOLOGICAL EXAMINATION OF 180 PATIENTS WITH CLOSED CEREBROCRANIAL INJURY IN THE ACUTE PERIOD WAS MADE. AS CONCERNS THE SEVERITY OF THE LESION THE PATIENTS WERE DIVIDED INTO 3 GROUPS, VIZ WITH LIGHT, MEDIUM SEVERE AND SEVERE CEREBROCRANIAL TRAUMA. THESE PATIENTS DEMONSTRATED DIVERSE OPHTHALMOLOGICAL CHANGES. PATHOLOGICAL RETINOBRACHIAL INDEX WAS REVEALED IN 55.4PERCENT OF THE CASES, EYE FUNGUS CHANGES IN 48.3PERCENT, DISTURBED REGULATION OF THE OPHTHALMOTONE IN 40PERCENT AND CHANGED FIELD OF VISION IN 17.2PERCENT OF INSTANCES. A CLASSIFICATION OF EYE FUNGUS CHANGES IN CLOSED CEREBROCRANIAL INJURY IN THE ACUTE PERIOD IS OFFERED. WITH IMPROVEMENT OF THE CLINICAL CONDITION OF THE PATIENTS THE INCIDENCE OF OPHTHALMOLOGICAL SYMPTOMS DECREASED.

UNCLASSIFIED

Acc. Nr: **AP0044639**

Ref. Code: **UR0497**

PRIMARY SOURCE: **Klinicheskaya Meditsina, 1970, Vol 48,**
Nr 1, PP 105-109

**THE ROLE OF RHEOHEPATOGRAPHY IN THE DIAGNOSIS
OF LIVER ALVEOCOCOSIS**

B. I. Alperovich, A. P. Rodionova

Summary

Rheohepatography was employed for the first time for the diagnosis of alveococcosis of the liver. This investigation was carried out in 37 patients in whom the diagnosis of alveococcosis was confirmed operatively or by means of detailed clinico-laboratory examination. The authors established that in liver alveococcosis on rheohepatograms there are seen characteristic changes: a flattened form of rheographic curves with reduced voltage, shortening of the phase of rapid filling, decrease of the rheographic index and of the intrasystolic index of filling. Rheograms of the liver recorded in intact regions do not differ from that in healthy persons. The authors arrived at the conclusion that rheohepatography is of interest for out-patient examinations of the population for alveococcosis, being a valuable additional method of diagnosis.

REEL/FRA
19771434

02 Feb

Acc. Nr:

AP0041518

Abstracting Service:
CHEMICAL ABST.

Ref. Code:

UR0078

83474t Effect of the structure of some phenols on the extrac-
tion of rubidium and cesium. Rodionova, G. S.; Alekseeva,
V. V.; Starostin, V. V. (USSR). *Zh. Neorg. Khim.* 1976,
15(1), 176-8 (Russ). Rb and Cs were extd. from pH 12-13
solns. by alkyl or aryl-substituted phenols. The distribution
coeff. (*D*) depended on the structure of phenols, nature of solvent,
and pH of soln. At pH 12.5, with kerosine as solvent and *M*
concn. of extg. agents, *D* for Cs were (phenol, *D*): 2-(α -methyl-
benzyl)-4-chlorophenol, 85.9; 2-(α -methylbenzyl)-4-methyl-
phenol, 20.3; 2-*sec*-butyl-4-methylphenol, 0.067; *m*-nonylphenol,
3.0. Values of *D* for 8 phenols at pH 12 and 13 and for sepn. of
Cs and K, Cs and Rb, and Rb and K are given. Cs can be extd.
selectively from solns. contg. large excess of K, Na, or Rb.

HMJR

REEL/FRAME

19751386

USSR

UDC 576.851.45 097.35:612.115.3

RODIONOVA, I. V., Institute of Epidemiology and Microbiology imeni Gamalei,
Academy of Medical Sciences USSR

"Determination of the Fibrinolytic Activity of Tularemia Bacteria"

Moscow, Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, No 2, 1973,
pp 53-55

Abstract: The Astrup-Mullertz method was employed to test the fibrinolytic activity of Francisella tularensis strains (holarctic No 503 and No 9 including Japanese varieties Kosho, Jato-86, and Jama; nonarctic Schu and avirulent No 38; Central Asian Strains No 37, 543, 120) against white mouse, rat, rabbit, guinea pig, and bovine fibrinogen. No fibrinolytic activity was revealed. Prior revelations of such activity by other methods are probably erroneous because they did not take the action of profibrinolysin into account.

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USSR

UDC: 591.615+616.2-036.21

OLSUF'YEV, N. G., DOBROKHOTOV, B. P., DUNAYEVA, T. N., PONELKINA, A. A., RODIONOVA, I. V., ARSEN'YEV, V. P., and PETROV, V. G., Tularemia Laboratory and Vectors Laboratory, Division of Infections with Natural-Foci, Institute of Epidemiology and Microbiology, Academy of Medical Sciences USSR, Moscow

"The Effect of Sanctuaries on Natural Foci of Infections"

Moscow, Zoologicheskii Zhurnal, Vol 49, No 11, Nov 70, pp 1697-1704

Abstract: The Priokako-Terrasnyy Game Preserve in the southern part of Moskovskaya oblast has a varied fauna whose species composition and numbers are similar to those in natural forest biocenoses of the past. Wild ungulates and small mammals, particularly rodents, are very abundant. Studies conducted in 1968 and 1969 disclosed the presence of a great number of adult *Dermacentor pictus* and *Ixodes ricinus* ticks feeding on the ungulates. *I. trianguliceps* and *I. apronophorus* were less numerous. Microscopic examination revealed a number of microorganisms in the ticks: *tularensis* in *D. pictus*, tickborne encephalitis virus in *I. ricinus* and *D. pictus*, and *Erysipelothrix rhusiopathiae*, *Listeria monocytogenes*, and *Pasteurella pseudotuberculosis* in the rodents. Sanctuaries such as game preserves tend to maintain natural foci of infections because of the

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OLSUF'YEV, N. G., et al, Zoologicheskii Zhurnal, Vol 49, No 11, Nov 70, pp 1697-1704

relative constancy of the many populations of wild mammals and the large numbers of Ixodes ticks.

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USSR

UDC 576.851.45.078.2

RODIONOVA, I. V., Tularemia Laboratory, Institute of Epidemiology and Microbiology imeni N. F. Gamaleya, Academy of Medical Sciences USSR

"Differentiation of Geographical Races of Francisella tularensis on the Basis of Citrulline Ureidase Activity"

Moscow, Laboratornoye Delo, No 1, 1970, pp 42-43

Abstract: A color test for citrulline ureidase activity is proposed as a means of differentiating *Francisella novicida* and three geographical races of *F. tularensis* - nearctic (Schu, Schu-avirulent, No 38), holarctic (Nos. 503, 9, Sudo, Kosho, Tanji), and Central Asian (Nos. 117, 37, 112). Cultures were grown for 48 hours on a medium consisting of fresh fish hydrolysate, cystine, and glucose. The color reaction is obtained by using freshly prepared medium at pH 7.2, containing in 100 ml of distilled water, 0.03 g of K_2HPO_4 , 0.5 g of NaCl, 1 g of D-citrulline, and 0.001 g of phenol red. The original pinkish-yellow of the medium does not change color or turns bright pink depending on the tularemia strain tested.

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BOTOVA, R. F., YEZHQVA, E. A., ZALIZNYAK, M. A., RODINOVA, L. A., CHERKASHNEVA, K. UDC 681.3.06:51

"Translator for the "ARAGATs" Computer"

Uch. Zap. Perm. Un-t, [Scientific Writings of Perm' University], 1970, No 220, pp 149-160, (Translated from Referativnyy Zhurnal Kibernetika, No 5, 1971, Abstract No. 5V642, unsigned).

Translation: The translator for the "ARAGATs" computer is based on the TA-1 translator for the M-20 computer. The input language is ALGOL-60 with some limitations.

USSR

UDC 577.472.614+577.391

GUS'KOVA, V. M., BRAGINA, A. N., ZASEDATELEV, A. A., IL'IN, B. N., KUPRIYANOVA, V. M., MASHNEVA, N. I., RODIONOVA, L. F., SUKAL'SKAYA, S. Ya., and TIKHONOVA, A. I., Leningrad Scientific Research Institute of Radiation Hygiene, Ministry of Health RSFSR

"Effect of a Mixture of Uranium Fission Products on Sanitary Conditions and Hydrobionts in Weakly Mineralized Bodies of Fresh Water"

Kiev, Gidrobiologicheskii Zhurnal, Vol 6, No 4, Jul/Aug 70, pp 5-11

Abstract: Pollution of water with two mixtures of radionuclides (mixture I, 52% rare earth radioisotopes and 20% alkali earth elements; mixture II, 40% rare earth radioisotopes and approximately 34% zirconium 95 and niobium 95) at concentrations ranging from $2.0 \cdot 10^{-7}$ to $1.0 \cdot 10^{-5}$ curie/liter was studied. The substances did not affect the sanitary conditions or the hydrobionts studied (*E. coli*, protococcal algae, Infusoria, duckweed). Biochemical oxygen demand and development of saprophytic mycoflora were inhibited only at concentrations above $1.0 \cdot 10^{-3}$ curie/liter. The rate of accumulation decreased from the lowest link (microorganisms) to the highest (fish). Adverse effects of the radioisotopes on developing fish spawn varied with the stage of

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GUS'KOVA, V. N., et al, Gidrobiologicheskiy Zhurnal, Vol 6, No 4, Jul/Aug 70, pp 5-11

development. Effects were evident in the early stages of embryogenesis at a concentration of $1 \cdot 10^{-5}$ curie/liter and in later stages at $1.0 \cdot 10^{-3}$ curie/liter.

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1/2 019
UNCLASSIFIED
TITLE--EXTRACTION OF ACTINIUM AS ITS COMPOUND WITH
1,PHENYL,3,METHYL,4,BENZOYLPYRAZOLONE,5 -U-
AUTHOR--(03)-KARALOVA, Z.K., PYZHOVA, Z.I., RODIONOVA, L.M.
PROCESSING DATE--04DEC70
COUNTRY OF INFO--USSR
SOURCE--ZH. ANAL. KHIM.; 25: 909-13 (MAY 1970)
DATE PUBLISHED----MAY70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--SOLVENT EXTRACTION, ACTINIUM, BENZENE, PYRAZOLE, BENZENE
DERIVATIVE, ORGANOMETALLIC COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3008/1178
CIRC ACCESSION NO--AP0138193
STEP NO--UR/0075/70/025/000/0909/0913
UNCLASSIFIED

2/2 019
CIRC ACCESSION NO--AP0138193
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--04DEC70

ABSTRACT. ACTINIUM CAN BE QUANTITATIVELY
EXTRACTED AS ITS COMPOUND WITH 1-PHENYL-3-METHYL-4-BENZOYLPYRAZOLONE, 5
BY A MIXTURE OF BENZENE AND OCTYL ALCOHOL FROM SOLUTIONS WITH PH 2.6.
EXTRACTION OF ACTINIUM WAS STUDIED AS A FUNCTION OF PH, THE REAGENT
CONCENTRATION, THE NATURE OF THE SOLVENT, THE PHASE CONTACT TIME.
CONDITIONS WERE FOUND FOR SEPARATING ACTINIUM FROM RADIUM THORIUM, LEAD,
AND BISMUTH ISOTOPES. THE YIELD OF ACTINIUM IS 90 PERCENT.
FACILITY: INST. OF GEOCHEMISTRY AND ANALYTICAL CHEMISTRY, MOSCOW.

UNCLASSIFIED

USSR

Inorganic Compounds

UDC 542.61:546.791-31

BLINOVA, N. I., KOZHINA, I. I., RODIONOVA, L. P., and SOLNISEV, V. M.

"Solution of Some Uranium Oxides in Sulfuric Acid"

Leningrad, Radiokhimiya, Vol 15, No 3, 1973, pp 391-397

Abstract: Changes in the composition and structure of tetragonal and cubic uranium oxides during solution at 90° in 2.0, 10.0, and 15.0 N H₂SO₄ were studied. Solution was carried out in an Ar atmosphere. Solution of U₄O₉ and beta-U₃O₇ proceeded with an insignificant change in the chemical composition. Other oxide phases did not form in the process. The concentration of H₂SO₄ had no effect on the limiting composition of the two oxides. The lower limit of the existence of the U₄O₉ phase was at a composition in the vicinity of UO_{2.231±0.005} and that of the beta-U₃O₇ phase at a composition in the vicinity of UO_{2.287±0.005}. For gamma-U₃O₇ and tetragonal and pseudocubic oxides with the compositions UO_{2.37} to UO_{2.40}, the limiting compositions varied with the concentration of H₂SO₄ and with the method by which the initial oxide had been

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BLINOVA, N. I., et al., Radiokhimiya, Vol 15, No 3, 1973, pp 391-397

prepared. As shown by the compositions on solution first in 2 N H_2SO_4 and then in 10 N H_2SO_4 , the changes in composition were reversible for these oxides. The lower limit of existence of the gamma- U_3O_7 phase at 90° was at a composition in the vicinity of $UO_{2.346 \pm 0.005}$. In the case of the oxides the behavior of which varied with the method of preparation, one could assume a lack of uniformity in the phase composition of the samples, which were apparently inhomogeneous in that respect. The authors thank Prof. U. M. Tolmachev for his help in the investigation.

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USSR

UDC 541.451:546.791

BLINOVA, N. I., RODIONOVA, L. P., and TOLMACHEV, YU. M.,

"Reactions of Mixed Uranium Oxides With Acids"

Leningrad, Radiokhimiya, Vol 12, No 6, 1970, pp 835-838

Abstract: When U_3O_8 is dissolved in acetic acid at $60^\circ C$ in concentrations ranging from 0.3 to 17.2 N, the lower equilibrium oxide formed in 7.0 M CH_3COOH is $UO_{2.57}$. In perchloric acid U_3O_8 yields U_2O_5 ($UO_{2.50}$) as the lower equilibrium oxide in concentration range 0.25 to 2.0 N. When U_2O_5 is dissolved either in acetic or perchloric acid at 90° , the same oxides are formed as in the case of U_3O_8 . Reaction of U_3O_8 with 1 N nitric acid at 40° or 60° in presence of anthranilic acid yields the pentoxide U_2O_5 . X-ray analysis showed that in the equilibrium oxides (up to $UO_{2.57}$) there exists the hexagonal phase, characteristic of the U_2O_5 oxide.

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RODIONOVA, M.A.

UNCLASSIFIED

SECTION III

SO: SELECTED PERSONNEL

PC-99

SEPT 71

Name: Institute of Biophysics, Pushchino
Description:

(U) During this quarterly reporting period, 25 new articles were identified from the Institute of Biophysics, Pushchino. On the basis of these articles, it was possible to identify 32 new personalities with the Institute. These personalities, the subjects of the articles, and the dates are given below:

<u>Allyova, S. A.</u>	radiation effect	1971 (34)
<u>Apkayova, G. F.</u>	phosphorylation	
<u>Arlova, D. V.</u>	radiation effect	1970 (35)
<u>Azhip, Ya. I.</u>	radiation effect	1971 (36)
<u>Begadze, I. F.</u>	hypoxia	1969 (37)
<u>Budel, Ye. P.</u>	radiation effect	1970 (38)
<u>Dalryou, T. I.</u>	luminescence	1970 (39)
<u>Dmitriyeva, V. A.</u>	radiation effect	1970 (39)
<u>Domareva, O. P.</u>	blood plasma	1969 (40)
<u>Dubrov, A. P.</u>	radiation effect	1970 (39)
<u>Gebelova, N. A.</u>	biochemical analysis	1971 (41)
<u>Gamsal, Ye. E.</u>	muscle physiology	1971 (42)
<u>Ivkova, M. N.</u>	radiation effect	1970 (35)
<u>Kaetkin, V. S.</u>	serum albumin	1971 (43)
<u>Khokhlova, G. K.</u>	phosphorylation	1971 (34)
<u>Kinlov, A. N.</u>	muscle physiology	1971 (44)
<u>Kiyagina, V. P.</u>	salivary gland	1970 (45)
<u>Korol, B. A.</u>	oligonucleotide	1970 (46)
<u>Koshaleva, G. M.</u>	radiation effect	1971 (47)
	biochemical analysis	1971 (48)

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Kuzina, S. V.	tissue culture	1970 (47)
Horvich, D. S.		
Udvedeva, I. F.	lactate dehydrogenase	1971 (48)
Peshkova, L. V.	radiation effect	1971 (46)
Pronevich, L. A.	phosphorylation	1971 (49)
Rodionova, M. A.	antibiotic	1970 (50)
Shchipakina, V. N.	mitochondrion	1971 (51)
Shobeyer, T. H.	phosphorylation	1971 (49)
Tsvetkov, V. D.	radiation/vibration	1970 (52)
Ukrichina, N. V.	radiation effect	1970 (55)
Vilenchik, M. M.	blind plasma	1969 (40)
Zamyatina, A. A.	lactate dehydrogenase	1971 (48)
	radiation effect	1970 (53)
Dubrov and Koshcheva (41)	muscle physiology	1971 (42)

are associated with the Laboratory of Cell Biophysics at the Institute. Reference 52 above is of special interest since it presents an investigation of combined stresses, i.e., radiation and vibration in addition to the above articles, five of the twenty-five (54-58) were authored by persons already identified with the Institute of Biophysics, Pushchino. Reference 55 associates the authors of the article, L. V. Slozhenikina, V. L. Migušina, and A. M. Kuzin, with the Department of Radiobiology at the Institute.

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UDC 577.154

KAPITONOVA, L. S., RODIONOVA, N. A., and FENIKSCVA, R. V., A. I. Bakh
Institute of Biochemistry, USSR Academy of Sciences, Moscow

"Purification and Properties of Pectate-Trans-Eliminase of Clostridium
felsineum"

Moscow, Biokhimiya, No 5, 1973, pp 1054-1061

Abstract: Pectate-trans-eliminase was obtained from the culture fluid of the
anerobe Clostridium felsineum No 5, by precipitation with alcohol, separation
on CM-cellulose, and filtration through Sephadex-G-200. The preparation,
purified 225 times and homogeneous in polyacrylamide gel electrophoresis, had
a molecular weight of 105,000. It was highly active at pH 8 to 10, espec-
ally at pH 8.5, and inactive at pH 4 to 6. CaCl_2 , CoCl_2 , CdCl_2 , SrCl_2 , and
 MnCl_2 increased the activity of the enzyme. EDTA inactivated it while ZnCl_2 ,
 BaCl_2 , and MgCl_2 inhibited it. Study of the substrate specificity of trans-
eliminase showed it to be most active against pectic acid, much less active
against partly esterified pectin, and inactive against completely esterified
pectic acid. The purified enzyme macerated potato tuber and flax stem tissues.
Its specific macerating activity was 100 times greater than in the culture
fluid.

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1/2 017

UNCLASSIFIED

PROCESSING DATE--13NOV70

TITLE--MODELING OF BIOTIN BIOSYNTHESIS. 2. INTRODUCTION OF SULFUR ATOMS INTO MOLECULES OF 2-IMIDAZOLINE DERIVATIVES -U-
AUTHOR--(05)-RODIONOVA, N.A., UNANYAN, M.P., KONDRATYEVA, G.V., ZAVYALOV, S.I., FILIPPOV, V.V.
COUNTRY OF INFO--USSR

R

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3) 660-5
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY
TOPIC TAGS--IMIDAZOLE, KETONE, ORGANIC SULFUR, BIOSYNTHESIS, GLYCINE, SERINE, VITAMIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1999/1764

STEP NO--UR/0062/70/000/003/0660/0665

CIRC ACCESSION NO--AP0123563

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--13NOV70

2/2 017
CIRC ACCESSION NO--AP0123563
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATING 3.5 G 4, METHYL, 2,
IMIDAZOLINONE WITH 1.1 G PARAFORMALDEHYDE AND 1-2 DROPS ET SUB3 N IN
MEOH 3 HR GAVE 4(5), METHYL, 5(4), HYDROXYMETHYL, 2, IMIDAZOLINONE, DECOMPD.
LARGER THAN 300DEGREES. SIMILAR REACTION WITH PARAFORMALDEHYDE IN THE
PRESENCE OF PIPERIDINE IN MEOH 4 HR GAVE 58PERCENT 4(5),
METHYL, 5(4), PIPERIDINOMETHYL, 2, IMIDAZOLINONE, DECOMPD. SMALLER THAN
290DEGREES, ALSO PREPD. FROM
1,3, DIACETYL, 4(5), METHYL, 5(4), BROMOMETHYL, 2, IMIDAZOLINONE AND
PIPERIDINE. HYDROXYDEHYDRODETHIOBIOTIN AND PARAFORMALDEHYDE REFLUXED IN
ETOH 3 HR GAVE HYDROXYDEHYDRODETHIOBIOTIN, DECOMPD. LARGER THAN
280DEGREES. 1,3, DIACETYL, 4, (5), BROMOMETHYL, 2, IMIDAZOLINONE AND ACSR
IN ME SUB2 CO OVERNIGHT GAVE 36PERCENT 1,3,
DIACETYL, 4(5), (ACETYLTHIOMETHYL) 2, IMIDAZOLINONE, M. 49-51DEGREES.
SIMILARLY WAS PREPD. THE 4(5), ME ANALOG, M. 67-80DEGREES AND
1,3, DIACETYL, 4, 5, BIS(ACETYLTHIOMETHYL), 2, IMIDAZOLINONE, M.
106-70DEGREES, AND
1,3, DIACETYL, 4(5), (ACETYLTHIOMETHYL), 5(4), DELTA, CARBETHOXYVALEROYL,
2, IMIDAZOLINONE, M. 109-100DEGREES, WHICH WITH N, BROMOSUCCINIMIDE IN
REFLUXING CCL SUB4 GAVE IN 1 HR AN OIL, WHICH TREATED WITH ACSR, THEN
WITH AQ. KMNO SUB4, GAVE AFTER FINAL HEATING 3 HR WITH AQ. HCL
1,3, DIACETYL, 4(5), (ACETYLTHIOMETHYL), 5(4), (CARBETHOXYANYL),
2, IMIDAZOLINONE, OIL. A POSSIBLE SCHEME OF BIOGENESIS OF BIOTIN FROM
SERINE, GLYCINE AND DETHIOBIOTIN WAS DISCUSSED. FACILITY: INST.
ORG. KHIM. IM. ZELINSKOGO, MOSCOW, USSR.

UNCLASSIFIED

1/2 039 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--THERMOCOMPENSATED MICROTENSORS FOR STRESS CONCENTRATION
MEASUREMENTS -U-
AUTHOR-(103)-TISENKO, N.G., YAROSHEVSKAYA, L.S., RODIONOVA, N.A.
COUNTRY OF INFO--USSR
SOURCE--ENERGOMASCHINOSTROENIE, VOL. 16, MAR. 1970, P. 10-12
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR, METHODS AND
EQUIPMENT
TOPIC TAGS--STRESS CONCENTRATION, AUSTENITIC STEEL, ALUMINUM ALLOY,
TENSOMETER, MICROELECTRONICS, BRONZE, BRASS, CAST IRON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/1487

STEP NO--UR/0114/70/016/000/0010/0012

CIRC ACCESSION NO--AP0120274

UNCLASSIFIED

2/2 039

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120274

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THEORETICAL ANALYSIS OF THE PERFORMANCE OF A CLASS OF MICROTENSORS IN THE MEASUREMENT OF STRESS CONCENTRATIONS IN SMALL AREAS OF MACHINE PARTS AND COMPONENTS. NOMOGRAMS ARE PLOTTED FOR THE SELECTION OF SUITABLE PARAMETERS FOR MICROTENSORS INTENDED FOR SPECIFIC APPLICATIONS. THE USEFULNESS OF THE APPLICATION OF WIRE LOOP MICROSENSORS OF THIS TYPE, WITH 2-3 MM BASES AND 80-100 RESISTANCES, TO CAST IRON, PERLLITE AND AUSTENITE STEELS, BRASS, BRONZE, ALUMINUM ALLOYS AND OTHER MACHINE PART MATERIALS IS POINTED OUT.

UNCLASSIFIED

USSR

TIMOFIYEVSKAYA, L. A., and KODIONOVA, R. P.

"Comparative Evaluation of the Toxicity of Some Aromatic Polynitro Compounds"

V sb. Toksikol. novykh prom. khim. veshchestv (Toxicology of Novel Industrial Chemical Compounds -- collection of works), No 2, Moscow, "Meditsina," 1973, pp 138-144 (from RZh-Biologicheskaya Khimiya, No 10, Oct 73, Abstract No 20 F 1689)

Translation: In experiments on rats it has been established that single inhalation of the vapors of trinitrobenzene [I; $C_6H_3(NO_2)_3$], hexanitro-diphenyl sulfide {II; $[(NO_2)_3C_6H_2]_2S$ } and octogene [III; $C_4H_6(N-NO_2)_4$] in concentrations approaching saturation levels at 18-20° does not lead to development of acute toxic symptoms. The LD₅₀ value of I, II, III for rats on oral administration is 572 mg/kg, 470 mg/kg and <10 mg/kg respectively. On poisoning mice with I and II, the CNS and peripheral blood are affected. 1-1.5 hrs after administering lethal doses of I and II to mice, the content of Mthb in the blood reaches 57%. Administration of I for 24 + 4 days leads to the death of 70% of animals. At the 25th day the death rate of mice getting II is 100%. Application of I and II in form of a 33% cream onto the rabbits'
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USSR"

TIMCFIYEVSKAYA, L. A., and RODIONOVA, R. P., V sb. Toksikol. novykh prom. khim. veshchestv, No 2, Moscow, "Meditsina," 1973, pp 138-144

skin leads to development of hyperemia, edema, and fine point hemorrhages. It has been shown that I, II, III have the ability to penetrate undamaged skin.

2/2

Analysis and Testing

USSR

~~RODIONOVA, T. V.~~ *R*

"Contemporary Analytical Methods for Materials"

Moscow, Zhurnal Analiticheskoy Khimii, Vol 25, No 4, Apr 79, p 801

Abstract: The book is a collection of reviews covering literature published up to 1967, and includes following topics. Theory and application of coulometry -- MIRKIN, A. V. Chronopotentiometric Analysis -- BARINOV, V. G., and SONGINA, O. A. Polarography with deposition on a stationary electrode -- STROMBERG, A. G., and ZAKHAROV, E. A. Contemporary methods in radioactivation analysis -- PEREZHOGIN, G. A. Analytical methods for semiconductors -- LYALIKOV, YU. S., KOPANSKAYA, L. S., and LYALIKOVA, R. YU. Determination of trace amounts of water -- DROZDOV, V. A., KRESHKOV, A. P., and PETROV, S. P. Concentration of admixtures by extraction of macrocomponents -- KUZ'MIN, N. M., and ZOLOTOV, YU. A. Electrochemical methods for determination of platinum metals and gold -- YEBZERSKAYA, N. A.

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USSR

RODIONOVA, T. V., Zhurnal Analiticheskoy Khimii, Vol 25, No 4,
Apr 70, p 801

Chromatographic methods for separation and extraction of rhenium (VII)
from industrial solutions -- GAYBAKYAN, D. S., and AGASYAN, P. K.
Photometric methods for determination of iridium, rhodium, ruthenium
osmium -- BUSEV, A. I., et al., niobium and tantalum -- YELINSON, S.V.,
and vanadium -- DOLGOREV, A. V., PODCHAYNOVA, V. N., and DERGACHEV,
V. YA. Application of thiazole azocompounds and amidoximes in
analytical chemistry -- BUSEV, A. I., et al.

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1/2 023 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--ABOUT NON SYMMETRICAL BEND OF CATENOID SHELL -U-
AUTHOR--RODIONOVA, V.A. *R*
COUNTRY OF INFO--USSR
SOURCE--VESTNIK LENINGRADSKOGO UNIVERSITETA, NO 1, MATEMATIKA, MEKHANIKA,
ASTRONOMIYA, 1970, NR 1, PP 123-130
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS
TOPIC TAGS--ASYMMETRIC SHELL STRUCTURE, STRESS ANALYSIS, SHELL DEFORMATION

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1984/0387 STEP NO--UR/0043/70/000/000/0123/0130
CIRC ACCESSION NO--AP0055172
UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0055172

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THIS PAPER A CATENOID SHELL IS CONSIDERED. IT IS INDICATED HOW BOUNDARY CONDITIONS INFLUENCE THE STRAIN STRESS STATE OF THE SHELL. THIS INFLUENCE IS NOTICED IN THE MAIN STRESS STATE AS WELL AS FOR CYLINDRICAL SHELL (3). BESIDES FOR THE SUPPORTED CATENOID THE DISPLACEMENT OF w INCREASES SIGNIFICANTLY FOR SOME PARAMETERS OF THE SHELL AND FOR SOME TYPES OF LOADS. THIS FACT IS IN AGREEMENT WITH THE RESULTS (6), (8). A SOLUTION IS RECEIVED BY THE METHOD OF FINITE DIFFERENCES.

UNCLASSIFIED

UDC 575.111/.23:635.264

USSR

TARASOV, V. A., and ~~RODIONOVA, V. V.~~, Institute of General Genetics, Academy of Sciences USSR, Moscow

"Investigation of the Cytogenic Effects Produced in *Allium fistulosum* Cells by Laser Irradiation"

Moscow, Genetika, Vol 8, No 1, 1972, pp 12-16

Abstract: Laser irradiation (wavelengths 4880, 5682, and 6329 Å) causes a statistically significant increase in the number of *Allium fistulosum* cells with chromosomal aberrations. With increasing doses (0.5-12.8 j/cm² of 4,880 and 6,328 Å beams, the number of mutated cells eventually reaches a plateau. However, a wave length of 5,682 Å produces a maximum effect at a dose of 3.4 j/cm², beyond which the number of cells with restructured chromosomes decreases. The interval between irradiation and fixation of the cells (3-24 hrs) does not change the results. Higher doses of the above wave lengths suppress mitosis. Laser wave length of 106,000 Å induces no significant changes in chromosomal structure. X-ray irradiation (50 and 3,000 r) prior to laser irradiation does not modify the latter's cytogenic effect.

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USSR

UDC 519.24

RODNIKOVSKIY, V. B.

"Use of Sequential Criterion of Ratio of Probabilities for Classification of Objects"

Vychisl. Metody i Programmir. [Computer Methods and Programming -- Collection of Works], No 3, Saratov University, 1970, pp 45-48 (Translated from Referativnyy Zhurnal Kibernetika, No 3, 1971, Abstract No 3 V124 by A. Zaslavskiy).

Translation: Suppose the sequences $\xi_{11}, \xi_{12}, \dots, \xi_{1i}, \dots$ and $\xi_{21}, \xi_{22}, \dots, \xi_{2i}, \dots$ of independent random quantities each of which takes on a finite number of values, describe two classes of objects. A sequential criterion is studied for the ratio of probabilities used to place a new object in one of the two classes. If the distributions of random quantities in one sequence correspond with each other and differ from the distributions of random quantities in the other sequence, the problem is reduced to the known sequential Wald Criterion. Critical values are concluded for the sequential criterion of the ratio of probabilities without any assumption concerning correspondence of distributions of random quantities ξ_{ij} . It is proven that the solution is found after a finite number of steps with probability one.

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USSR

UDC 66.095.26:678.86

KOLESNIKOV, G. S. (DECEASED), SAFARALIYEVA, I. G., RODIONOVA, YE. F.,
and LUK'YANOVA, G. M., Institute of Organo Elemental Compounds, Moscow,
Academy of Sciences USSR

"Kinetics of Polymerization of Vinylphosphonic Esters"

Moscow, Vysokomolekulyarnyye Soyedineniya, Vol 12, No 5, May 70, pp
1051-1061

Abstract: A kinetic study was made of the block polymerization of a series of vinylphosphonic esters in the presence of azobisisobutyronitrile to ascertain the influence of the value and structure of the alkyl radical on the course of the polymerization process. Vinylphosphonic esters were synthesized and their properties determined, and the specific weights of the monomers and polymers of the vinylphosphonic esters were determined. The polymerization of dimethyl and diisopropyl vinylphosphonate with various initiator concentrations was staged for purposes of ascertaining the role of chain transfer through the monomer in chain termination. It was found that in the early

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USSR

KOLESNIKOV, G. S. (DECEASED) et al., Vysokomolekulyarnyye Soyedineniya, Vol 12, No 5, May 70, pp 1051-1061

stage of polymerization chain transfer through the alkyl groups of the monomer is the principal process resulting in the termination of macromolecule growth. In the later polymerization stages there is chain transfer through the alkyl groups of the resultant polymers.

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USSR

UDC 532.593 + 662.215.2

RODIYONOV, V. N., SUKHOTIN, A. P., Moscow

"Parameters of Elastic Waves Radiated with a Spherical Explosion in Metals with Various Strengths"

Fizika Goreniya i Vzryva, No 1, Mar 71, pp 142-146.

ABSTRACT: The influence of the yield point of a metal on the parameters of the elastic compression wave radiated upon an explosion is studied. The work was performed with three metals: Type A-00 aluminum, Type D-16 annealed duralumin and Type D-16 hardened duralumin. These metals were selected due to the similarity of their mechanical properties except for strength. The results of the work and the equations of the theory of elasticity allow the entire picture of motion and state of the metal in the elastic area to be reconstructed.

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USSR

UDC 536.581.3

DZHAFAROV, T. D., RODKIN, YE. A.

"Cryostat for Studying Optical Absorption under Uniaxial Compression"

Moscow, Pribery i Tekhnika Eksperimenta, No 6, 1971, pp 181-182

Abstract: The structural design and operating characteristics are presented for a cryostat designed to investigate the optical absorption spectra in semiconductors under uniaxial compression to 160 kg at $T = 78$ and 300° K. The force on the sample in the cryostat is created by a pneumatic chamber, and with a sample cross section of $4 \times 0.5 \text{ mm}^2$, the pressure is $\sim 8 \text{ tons/cm}^2$. Absorption spectra are presented for tellurium investigated in the presented cryostat using the UR-20 infrared spectrophotometer at $T = 78^\circ$ K. The spectra are presented for pressures of $p = 0, 900$ and $1,200 \text{ kg/cm}^2$. The light was polarized parallel to the crystallographic C-axis of the tellurium, and the direction of the compression was parallel to the C-axis. The cryostat can also be used for measurements on the IKS-21 spectrophotometer.

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USSR

UDC 615.616.24-003.656.6

RODKINA, B. S., EN'KOVA, P. A.

"Effect of Dexamethazone on the Development of Experimental Silicosis"

V sb. Materialy XXI-XXII plenumov Resp. komis. po bor'be s sili-kozom (Materials of the 21st to 22nd Plenums of the Republic Commission for Controlling Silicosis--Collection of Works), Kiev, Nauk. dumka, 1972, pp 97-104 (from RZh-Farmakologiya. Khimioterapevticheskiye Sredstva. Toksikologiya, No 3, Mar 73, Abstract No 3.54.876)

Translation: Less intense development of silicosis was observed in male rats administered 100 mg of quartz dust once intratracheally and then after 4.5 months, 3 times a week receiving 0.025 mg of dexamethazone (I) internally. In the rats which 12 days after administration of 75 mg of powdered quartz received I internally twice a day in the amount of 0.02-0.03 mg for 2.5 months and then hydrocortisone daily intramuscularly in a 1 mg dose, inhibition of the silicosis development was not observed after 4-4.5 months. Atrophy of the adrenal glands was noted here. It is considered that on daily administration of I, the corticotropic function of the hypophysis was inhibited. The bibliography has 17 entries. USSR, Donetsa, Institute of Hygiene of Labor and Professional Disease.

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USSR

UDC 615.616.24-003.656.6

RODKINA, B. S., EN'YAKOVA, P. A.

"Effect of Amorphous Silica on the Experimental Development of Silicosis"

V sb. Materialy XXI-XXII plenumov Resp. komis. po bor'be s sili-kozom (Materials of the Twenty-first to Twenty-second Plenums of the Republic Commission for Controlling Silicosis--Collection of Works), Kiev, Naukova dumka, 1972, pp 83-90 (from RZh--Farmakologiya. Khimioterapevticheskiye Sredstva. Toksikologiya, No 3, Mar 73, Abstract No 3.54.880)

Translation: Amorphous silica was heated for three hours at a temperature of 500-600° and administered intratracheally to male rats in a dose of 22 mg. From 4.5 to 5 months later, a sharp increase in weight of the paratracheal lymph nodes and a 183 percent increase in the collagen content in the lungs were detected; histologically, in the lungs there was the standard picture of nodular silicosis in the far-advanced stage. The sharp fibrogenic activity of the fired amorphous silica is explained by water loss which promotes release of the active centers on the surface of the

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USSR

RODKINA, B. S., EN'YAKOVA, P. A., Materialy XXI-KVII plenumov
Resp. komis. po bor'be s silikozom, 1972, pp 83-90

dust particles and elimination of the shielding effect of the
hydroxyl groups bound to the surface. The bibliography has 21
entries. USSR, Donetsk, Scientific Research Institute of Hygiene
of Labor and Professional Disease.

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1/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--MOLAR VOLUMES OF GAS SOLUTIONS ALONG THE SATURATION LINE -U-
AUTHOR--(03)--LINSHITS, L.R., RODKINA, I.B., TSIKLIS, D.S.
COUNTRY OF INFO--USSR
SOURCE--Zh. Fiz. Khim. 1970, 44(3), 817-19
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--SOLUBILITY, AMMONIA, GAS STATE, NITROGEN, HYDROGEN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/1703 STEP NO--UR/0076/70/044/003/0817/0819
CIRC ACCESSION NO--AP0125324
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0125324

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SOLY. OF NH SUB3 IN COMPRESSED N-H MIXTS. CONTG. AR AND CH SUB4 WAS DETD. MOLAR VOLS. OF THE GASEOUS MIXT. OF CONST. COMPN. (20.6, H 61.8, AR 11.0, AND CH SUB4 6.6 MOLE PERCENT) WERE MEASURED AT 0, 10, 25, 50, 75, AND 100DEGREES AND AT PRESSURES OF 50-550 ATM. EXPTL. DATA THUS OBTAINED WERE PLOTTED IN THE COORDIANATES PV SV. P, WHERE P IS PRESSURE AND V IS MOLAR VOL., AND EXTRAPOLATED TO THE SATN. LINE. THE MOLAR VOLS. OF THE STUDIED GASEOUS MIXT. ALONG THE SATN. LINE WERE ASCERTAINED FROM THE PV VALUES CORRESPONDING TO THE SATN. PRESSURE AND ARE TABULATED FOR ALL THE STUDIED TEMPS. AT THE VARIOUS CONC. OF NH SUB3 IN GASEOUS PHASE. FACILITY: GOS. INST. AZOT. PROM. PROD. ORG. SIN., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 59:616.981.452:681.142.33

SOLDATKIN, I. S., RODNIKOVSKIY, V. B., and RUDENCHIK, Yu. V., All Union Scientific Research Antiplague Institute, Saratov, Computer Center, Saratov State University, and Central Asian Scientific Research Antiplague Institute Alma-Ata

"Statistical Modeling of a Plague Epizootic"

Moscow, Zoologicheskii Zhurnal, No 5, 1973, pp 751-756

Abstract: The authors constructed a probabilistic model of the spread of plague based on numerical characteristics of the process and used it to study the development of epizootics under changing conditions of transmission of the pathogen. With "input" data on various elements of the process (fleas feeding on gerbils with bacteremia, geographic range of infected fleas, etc.), they successively simulated on a computer the situations that might arise and obtained in the "output" the number and distribution of infected gerbils at a given moment. Tests of the model showed that the spread of epizootics with preassigned parameters is greatly inhibited by "extinction" of some of the infected fleas as a result of their entering colonies of gerbils that have recovered from the disease.

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USSR

UDC: 621.374.323

RODNOV, Yu. V., Institute of High Energy Physics, Serpukhov

"A 120 MHz Scaling Decade"

Moscow, Pribory i Tekhnika Eksperimenta, No 2, Mar/Apr 72, pp 65-67

Abstract: The paper describes a scaling decade with a maximum count rate of 120 MHz based on tunnel diodes and transistors. The decade is made up of five flip-flops connected in a ring. The flip-flops are connected through amplifiers to a decoder, and a gas-discharge digital tube is connected to the decoder outputs. A block diagram of the device is given together with schematic diagrams of the flip-flops and the decoder. The decade operates reliably on input pulse durations of no more than 10 ns and a minimum pulse amplitude of 3 V in a temperature range from 0 to 40°C. The decade has been used successfully for two years in physics experiments on the accelerator at the Institute of High Energy Physics in Serpukhov. The author thanks A. F. Dumaytsev and Yu. D. Prokoshin for assistance with the work. Four figures, bibliography of four titles.

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USSR

UDC 547.26'118

ZAVLIN, P. M., ~~RODNYANSKAYA, E. R.~~, D'YAKONOV, A. I., and AL'BITSKAYA, V. M.,
Leningrad Institute of Motion-Picture Engineers

"Reaction of Alkylphosphorous Acid Monochlorides With Thioethylene Glycol"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 8, Aug 71, pp 1874-1875

Abstract: In the reaction of alkylphosphorous acid monochlorides with thioethylene glycol in the presence of a hydrogen chloride acceptor -- triethylamine -- first the hydroxy group reacts to give β -mercaptoethyl alkyl phosphites, whose presence in the reaction products is confirmed by IR and PMR spectra. β -Mercaptoethyl alkyl phosphites are converted in the cold to the corresponding 1,3,2-oxathiaphospholane derivatives. The reaction of ethyleneglycolphosphorous acid chloride with thioethylene glycol gives a spiran derivative.

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USSR

UDC 669.295.018.9(088.8)

GAMELKIN, B. S., GOLIKOV, V. V., OGURTSOV, S. V., NEPOMNYASHCHIY, I. V.,
SAMAROV, M. A., SAVIKIN, V. I., and RODNYI, M. I.

"Method of Producing Alloys of Titanium With Refractory Metals"

USSR Author's Certificate No 258598, Filed 28/01/67, Published 30/04/70
(Translated from Referativnyy Zhurnal-Metallurgiya, No 2, 1971, Abstract
No 2 G197 P)

Translation: A method is suggested for producing alloys of Ti with
refractory metals by metallothermic reduction of preliminarily prepared
solutions of chlorides of the alloying metals to $TiCl_4$. To increase
the homogeneity and quality of the alloys produced, the chloride solu-
tions are heated to a temperature above the boiling point of the solu-
tion before the reduction process.

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USSR

UDC 616.988.75-053.2

CHESHIK, S. G., RODOV, M. N., IVANOVA, L. A., ZAYTSEVA, N. D., and KEONDZHAN, S. YE., Clinical Department, Institute of Virology imeni D. I. Ivanovskiy, USSR Academy of Medical Sciences, and City Clinical Hospital of Infectious Diseases No 82, Moscow

"Clinical Picture and Diagnosis of Hong-Kong A2 Influenza in Children"

Moscow, Pediatriya, No 5, May 71, pp 92-93

Abstract: During the peak of the Hong-Kong A2 influenza epidemic in 1969, the frequency of acute respiratory diseases increased 8.4 times among adults, 7.9 times among children aged 7-14, and only 2.4 times among children aged up to 2 years. Nevertheless, in absolute figures, the frequency was highest in the last group, because the pre-epidemic morbidity among small children was very great. Serological and fluorescent antibody tests performed on hospitalized patients in December 1968 through March 1969 revealed that all respiratory diseases identified in the pre-epidemic period were also diagnosed during the epidemic, though their relative proportions were somewhat smaller: 28.3% in December, 25.4% in January, and 10.4% in February. This makes it necessary to perform differential diagnoses of viral respiratory diseases in hospitals in order to distribute the patient in proper wards. Of the 122 children hospitalized with diagnosed influenza, 74 developed complications: 1/2.

USSR:

CHESHIK, S. G., et al., *Pediatrics*, No 5, May 71, pp 92-93

45 developed pneumonia, 9 developed bronchitis, and 20 developed other diseases. Among infants, toxicosis was less pronounced which developed in 47% of infants up to the age of 1 year and in 73% of infants aged up to 3 months. Among the youngest infants, pneumonia often developed suddenly and progressed with a fatal speed. Therefore, it is necessary to hospitalize these children regardless of the severity of the influenza.

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USSR

UDC 621.382.533.34

BURKINOV, SH.D., BASHIROV, A.M., GARSHEININ, V.V., GOROKHOV, V.A., RODOV, V.I.

"Investigation Of The Causes For Breakdown Of Thyristors During Operation In A Pulse Regime"

V sb. Poluprovodn. pribory v tekhn. elektrosvyazi (Semiconductor Devices In Electrical Communications Technology--Collection Of Works), Moscow, "Svyaz", 1970, pp 145-157 (from RZh--Elektronika i yeye primeneniye, No 2, February 1971, Abstract No 2B246)

Translation: It is shown that loss of efficiency of a thyristor in a pulse regime results as a consequence of burning through in the p-n-p-n structure of a channel 0.1--0.3 mm in diameter, while one of the possible causes for this is thermal generation of the carriers. 9 ill. 10 ref. S.A.

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1/2 035

UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--EXPERIMENTAL STUDY OF THE DISTRIBUTION OF MOBILE CARRIERS IN THE
BROAD BASE OF AN ENCLOSED P-N-P-N STRUCTURE -U-

AUTHOR--(03)-BASHIROV, A.M., GOROKHOV, V.A., RODOV, V.I.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(2), 350-2

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--THYRISTOR, RADIATION INTENSITY, CARRIER DENSITY, PN JUNCTION,
VOLT AMPERE CHARACTERISTIC, RECOMBINATION RADIATION, NEUTRON IRRADIATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1988/0068

STEP NO--UR/0449/70/004/002/0350/0352

CIRC ACCESSION NO--AP0105163

UNCLASSIFIED

2/2 035

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0105163

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DISTRIBUTION OF THE RADIATION INTENSITY FROM A THYRISTOR CROSS SECTION WAS DETD. PHOTOGRAPHICALLY IN A DIRECTION PERPENDICULAR TO THE PLANES OF THE P-N JUNCTIONS TO DET. THE CONC. DISTRIBUTION OF THE MOBILE CARRIERS. THE INTENSITY DISTRIBUTION CURVES WERE OBTAINED FOR 3 DIFFERENT C.DS. FOR THYRISTORS WITH A RESIDUAL VOLTAGE OF SIMILAR TO 1 V. THE INTENSITY CURVE HAS 2 MAX., THE LOWER ONE CORRESPONDING TO THE CENTRAL P-N JUNCTION AND THE HIGHER TO THE EMITTER BELONGING TO THE N BASE. THE DECREASE IN INTENSITY IN THE CENTER OF THE N BASE INDICATES THE PRESENCE OF A MIN. IN THE CONC. DISTRIBUTION OF THE MINORITY CARRIERS. AS THE C.D. INCREASES, THE INTENSITY DISTRIBUTION CURVES SHIFT IN PARALLEL TOWARD HIGHER INTENSITIES, INDICATING AN INCREASE IN THE CONC. OF THE MINORITY CARRIERS IN THE BROAD BASE. CURVES OBTAINED FOR A RESIDUAL VOLTAGE OF 3 V SHOW THAT THE DIFFUSION PATH (LIFETIME) IS LESS AT HIGHER VOLTAGES. THE LIFETIME DECREASES WITH AN INCREASE IN THE INJECTION LEVEL. THE INTENSITY WAS MEASURED FOR THE RECOMBINATION RADIATION BEFORE AND AFTER IRRADN. WITH FAST NEUTRONS. THE DISTRIBUTIONS OF THE RECOMBINATION RADIATION INTENSITY IN THE IRRADIATED SAMPLES IS SIMILAR TO THAT 3 V, INDICATING THAT THE CHANGE IN THE LIFETIME BROUGHT ABOUT BY RADIATION DEFECTS AFFECTS THE RESIDUAL VOLTAGE. THE CONCLUSIONS AGREE WITH THE CALCD. DATA (V. KUZ'MIN, 1963).

UNCLASSIFIED

RODOV, Ya. I.

UFRS 57493
13 Nov 72

- 48 -

It is correctly indicated in the article that availability of hospital care, capabilities of the hospital and availability of competent medical personnel, range serviced, state of communications and roads influence bed occupancy. These and other causes are the principal factors

*Sovetskoye Zdravookhraneniye, No 3, 1972.

The authors propose to calculate the mean annual bed occupancy by determining the number of days of bed vacancy due to hospital repair and other causes, mainly due to vacancy on days between patient discharge and admitting a new patient. In this sense, bed occupancy is expressed as the difference between 365 days and number of days of vacancy for the reasons indicated. Obviously, the number of vacancy days over the year referable to the interval between patient discharge and admission of a new patient depends largely on the bed turnover. The greater the turnover the higher, as a rule, the number of vacant days for this reason. Here, of course, everything is related not only to greater bed turnover but also to duration of vacancy. Thus, according to the information submitted by these authors, bed designated for abortions was used much less (311 days) with a 126.2 (bed occupancy: 341 days).

The authors of the article named* touch upon an important point. We know that incomplete use of hospital beds imparts considerably medical care for the people in such an important area as hospital care.

The article discusses computation of annual mean bed occupancy. At

the present time this index is computed by dividing the total number of bed-

days patients spend in hospital beds by the annual mean number of beds. This is how the index is determined for each hospital department and for the hospital as a whole.

[Article by Docent Ya.I. Rodov (Moscow); Moscow, Sovetskoye Zdravookhraneniye, Russian, No 10, 1972, pp 37-38]

WITH REFERENCE TO THE ARTICLE ENTITLED "SOME SUGGESTIONS FOR CALCULATING ANNUAL MEAN BED OCCUPANCY IN URBAN HOSPITALS" BY M.P. KOTTMAN AND L.V. LOKSHINA

UDC: 362.11:65.012.2(049.3)

RODOV, Ya. I.

Public Health

CONCERNING THE ARTICLE BY PROFESSOR I.D. BOGATYREV 'ON METHODOLOGICAL APPROACHES TO PLANNING OUTPATIENT POLYCLINIC CARE' (Article* by Ya. I. Rodov (Moscow); Moscow, Sovetskoye Zdravookhraneniye, Russian, No 7, 1970, Submitted 13 November 1970, pp 32-34)

SO: JPRS 54019
9 SEP 71
UDC: 602.121165.012.2(049.3)

This author raises a very important question as to the methods of planning an extremely important form of therapeutic and prophylactic care. It must be conceded that the existing methods, based mainly on reported data about the frequency of visits to outpatient institutions have a number of flaws. I.D. Bogatyrev mentions here the incomplete use of indices that have an appreciable influence on the scope and specialization of care (age and sex composition of the population, how physicians spent their working hours, etc). Some interesting information is given in his article to the effect that in a number of cities, the frequency of visits to polyclinics is considerably lower than the existing tentative norms (9-10 visits per urban resident) of indices of availability of outpatient care for the urban population (9.9 visits per resident in 1966). On this basis, the author concludes that the reports are not accurate and they are unsuitable as the basis for planning.

The existence of a certain number of visits that are doubled in the reports do not explain the considerable discrepancy between the reported data and special studies (4.6 visits according to the author and 9.9 according to the 1966 report). In our opinion, this matter should be further investigated. Typically enough, I.D. Bogatyrev, while he points to the unreliability of the reported data on the number of visits, does deem it possible to take into consideration primary visits for an ailment, and this would permit determination of number of total visits, since, as the author correctly indicates, the number of visits per ailment is rather stable.

In the proposals of I.D. Bogatyrev pertaining to methodological approaches to the planning of outpatient care, many aspects are not clear. On the basis of instability and obvious exaggeration of the visit index in the reports, the author suggests that two indices be used as the basis for planning outpatient polyclinic care: population size and sum of money from Sovetskoye Zdravookhraneniye, No 9, 1970.

USSR

UDC 669.295

RODYAKIN, V. V., GEGER, V. E., SKRYPNYUK, V. M.

"Magnesium-Thermal Production of Sponge Titanium"

Magniyetermicheskoye Proizvodstvo Gubchatogo Titana [English version above], Metallurgiya Press, 1971, 216 pages.

Translation of Annotation: This book presents general information on the physical-chemical properties, production and consumption of magnesium-thermal titanium. The theoretical principles of the technological processes involved in the production of magnesium-thermal sponge titanium are presented. The technology of production of magnesium-thermal titanium, design of apparatus, methods for utilization of apparatus and methods for elimination of problems arising during operation are studied in detail. The book is designed for engineering-technical and scientific workers, and can also be useful to graduate students and students of technical schools, specializing in the area of titanium metallurgy. 82 Figures; 27 Tables; 139 Biblio. Refs.

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USSR

UDC 669.295

RODYAKIN, V. V., GEGER, V. E., SKRYPNYUK, V. M., Magniyetermicheskoye
Proizvodstvo Gubchatogo Titan, Metallurgiya Press, 1971, 216 pages.

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USSR

UDC 669.295

RODYAKIN, V. V., GEGER, V. E., SKRYPNYUK, V. M., Magniyeternicheskoye
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USSR	
UDC 669.295	
RODYAKIN, V. V., GEGER, V. E., SKRYPNYUK, V. M., Magniyetermicheskoye Proizvodstvo Gubchatogo Titan, Metallurgiya Press, 1971, 216 pages.	
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USSR

UDC 669.295.053.28

SKRYPNYUK, V. M., and RODYAKIN, V. V.

"Measuring the Surface of Sponge Titanium"

Sb. tr. Vses. n.-i. i proyekt. in-t titana (Collection of Works of the All-Union Scientific Research and Design Institute of Titanium), 1970, 5, pp 59-66 (from RZH-Metallurgiya, No 11, Nov 70, Abstract No 11G153)

Translation: The methodology and results of measurements of the surface of magnesium-thermal sponge Ti are presented. The method of low-temperature adsorption (the BET method) is used. Ar is used as the source of absorbate at the temperature of 196° . The size of the specific surface of sponge Ti, produced by the magnesium-thermal method is commercial apparatus, can reach $2.5 \text{ m}^2/\text{g}$. 2 ill., 1 table, 8 bibl. entries. Authors' abstract

1/1

USSR

UDC 669.721.41

VIKHAREV, A. F., RODYAKIN, Y. Y., and BARANIK, I. A.

"Lower Titanium Chloride Refining of Magnesium"

Sb. tr. Vses. n.-i. i proyekt. in-t titana (Collection of Works of the All-Union Scientific Research and Design Institute of Titanium), 1970, 5, pp 76-81 (from RZh-Metallurgiya, No 11, Nov 70, Abstract No 11 G140)

Translation: During this reduction of titanium by magnesium from salt master alloys of the lower Ti chlorides, a high-dispersion Ti is produced which possesses very high refining properties as compared to Fe and Si in Mg. A study is made of the effect of composition of salt master alloys of lower titanium chlorides, their quality and quantity, and also of the method of their preparation with regard to refining properties and as regards the alloys in Mg. The consumption coefficients and the basic parameters of the Mg refining techniques with lower Ti chloride alloys are established. 2 ill., 2 tables, 7 biblio. entries. Author's Abstract.

1/1

Automotive

USSR

UDC 621.842.2-585.862-183.2:620.178.311.4

RODZEVICH, N. V., Candidate of Technical Sciences, AFONSKIY, V. P., Engineer,
KARDOVSKIY, V. S., Engineer, ZHUK, Ye. I., Candidate of Technical Sciences,
KONONENKO, P. D., Engineer and CHAPALA, N. P., Engineer

"Strength of Heavy Drive Shafts"

Moscow, Vestnik Mashinostroyeniya, No 1, Jan 71, pages 28-30

Abstract: This article presents the results of a study of the strength of the drive shafts used in the power trains of heavy trucks and other transport equipment. The two types studied were designed for transmission of torques of 300 and 600 kgm. The weakest links in the heavy drive shafts when tested without rocking in bearings were the forks and X-members of the universal joints. Cracks arose in the drive shafts in areas where tensile stresses were concentrated (apertures, notches, welded joints, spline ends, separation of induction-annealed layers, etc.). In order to achieve equal strength of elements and increase the load-bearing capacity of heavy drive shafts, it is recommended that continuous splined forks of type 38KhMYuA steel with

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USSR

RODZEVICH, N. V., et al, Vestnik Mashinostroyeniya, No 1, Jan 71,
pgs 28-30

nitrided surfaces be used. The notches designed to retain the end caps of tubular splined forks should be eliminated. The X-members should be strengthened by moving the oil aperture to the end of the member and increasing the radius of the fillet in the area of transition between the cylindrical portion of the pin and the central portion of the X-member.

2/2

- 20 -

Water Treatment

USSR

UDC 628.3 + 663.631

RODZILLER, I. D., and GOLOVENKOV, Yu. N.

"Purification of Sewage by the Reverse Osmosis Method"

Moscow, Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva Imeni D. I. Mendeleyev, Vol 17, No 2, 1972, pp 184-188

Abstract: A review type analysis of the literature data [64 references] on sewage purification by the reverse osmosis method -- hyperfiltration through semipermeable membrane under pressure exceeding the osmotic pressure -- is reported. Available data are insufficient as yet for the design of large scale equipment for sewage purification. The need is stressed for more studies of the membrane process itself and development of new membranes. A conclusion is reached that after the developmental difficulties have been mastered, this reverse osmosis purification may be by far the method of choice for concentration of expensive materials normally lost with sewage, for recycling of water in water poor areas, for removal of mineral impurities, removal of biologically inert organic materials, et.

1/1

USSR

YUSHCHENKO, Ye. L., BABENKO, L. P. and ROGACH, V. D.

"Basic Problems of Realization of COBOL-ALMO Translators"

Materialy Mezhevuz. Konf. po Mat. Obespecheniyu Avtomatizir. Sistem Upr.
[Materials of Inter-University Conference on Automatic Control System
Software -- Collection of Works], Moscow, 1973, pp 146-151 (Translated from
Referativnyy Zhurnal Kibernetika, No 9, 1973, Abstract No 9V702).

Translation: The peculiarities of the realization of COBOL related to the use of ALMO are studied. First of all, the basic difficulties in this realization in comparison to a translator from COBOL to a specific machine are noted: the need to "orient the output programs to a certain universality, making them equally suitable for an entire class of machines" and the orientation of ALMO language "to second-generation machines, little suited for the solution of automatic data processing problems." These difficulties are partially overcome by means of the insertion apparatus of ALMO and partially by means of a system of interpreting programs. The set of standard programs suggested was selected considering the provision of both convenience in writing of working programs and in programming of translators.

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USSR

Yushchenko, Yu. L., Babenko, L. P. and Rogach, V. D., Materialy Mezhevuz. Konf. po Mat. Obespecheniyu Avtomatizir. Sistem Upr., Moscow, 1972, pp 146-151.

The exchange of information with external storage (input-output in particular) is largely included among the functions of the operational systems of modern computers. Therefore, in producing input-output verbs in the COBOL programs, the thousands channel of ALMO is used, connecting the ALMO program to the operational systems of specific machines.

The work features a more detailed presentation of problems of programming of the descriptions of data, work with structures, input-output verbs and sequence control.

The insertion apparatus, a direct element in most macrogenerators in ALMO, is used not only for adjustment of working programs to the parameters of specific machines, but also to reduce the number of jumps in the translator, and also for many other purposes.

In the end, it is specially emphasized that "in designing the output program for the COBOL-ALMO translator, interpreting subroutines are used quite broadly: of the 16 COBOL operators, 6 are fully and 5 partially realized by these subroutines."

L. Khizder

2/2

USSR

ASNIN, V. M., LOMASOV, YU. N., and ROGACHEV, A. A., Physicotechnical Institute imeni A. F. Ioffe, Leningrad

"Formation Energy of Biexcitons in Silicon"

Leningrad, Fizika Tverdogo Tela, Vol 14, No 11, Nov 72, pp 3457-3458

Abstract: In a kinetic study of biexciton formation J. D. CUTHBERT found that $E_b = 0.6 \cdot 10^{-3}$ ev. Such a low binding energy value, however, is in conflict with the fact of the experimental observation of exciton molecules in silicon at $T = 4.2^\circ$ K and exciton concentrations of 10^{12} - 10^{14} cm^{-3} . Actually, the maximum possible number of biexcitons that can be attained under thermal equilibrium between excitons and biexcitons is determined by the mass-action law

$$n_b = n_{ex}^2 \frac{N_b}{N_{ex}^2} e^{-E_b/kT},$$

(1)

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USSR

ASNIN, V. M., et al., Fizika Tverdogo Tela, Vol 14, No 11, Nov 72, pp 3457-3458

where N_{ex} and N_b are the effective densities of states for excitons and biexcitons. The relation between exciton and biexciton concentrations is determined by the equation

$$\frac{dn_b}{dt} = \sigma v n_{ex}^2 - \frac{n_b}{\tau_b} - \sigma v \frac{N_{ex}^2}{N_b} n_b e^{-E_b/kT}, \quad (2)$$

where σ is the cross section for the formation of a biexciton from two free excitons, v is the thermal exciton velocity, τ_b the biexciton lifetime. For excitation conditions close to stationary, it follows from (2) that

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USSR

ASNIN, V. M., et al., Fizika Tverdogo Tela, Vol 14, No 11, Nov 72, pp 3457-3458

$$n_b = \frac{avn_{ex}^2}{\frac{1}{\tau_b} + \frac{1}{\tau_{ex}} e^{-E_b/kT}} \quad (3)$$

A flash lamp was used to excite luminescence, and n- and p-type silicon was used for the measurements. The biexciton binding energy E_b was found to be equal to $5.5 \cdot 10^{-3}$ ev. The variation of n_{ex}^2/n_b with temperature is very slight. The formation cross section for an exciton molecule is close to 10^{-14} cm².

3/3

USSR

UDC: 535.373.2

ROGACHEV, A. A., Physicotechnical Institute imeni A. F. Ioffe, Academy of Sciences of the USSR

"Biexcitons and Condensation of Excitons in Semiconductors"

Moscow, Izvestiya Akademii Nauk SSSR: Seriya Fizicheskaya, Vol 37, No 2, Feb 73, pp 229-235

Abstract: The article is a survey of experimental data which confirm the existence of biexcitons in germanium and silicon. It is shown that luminescent bands -- 0.709 eV in germanium and 1.08 eV in silicon -- are the consequence of radiative recombination of biexcitons. The condensation of biexcitons is investigated and it is shown that the density of the condensed phase in germanium is $2 \cdot 10^{18} \text{ cm}^{-3}$. The author thanks V. M. Asnin and N. I. Sablina for useful discussion of the problems posed by the work.

1/1

USSR

ASHIN, V. K., ZUEV, R. V., MURINA, T. M., PRONINOV, A. M., DOGACHEV, A. A.,
and SABLEVA, N. I., Physics Institute imeni P. N. Lebedev, Academy of Sciences
USSR

"Radiative Recombination of Biexcitons in Germanium"

Moscow, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 62, No 2, Feb
72, pp 737-741.

Abstract: The article describes results of a study undertaken to obtain additional data on the nature of the long-wave recombination radiation line in germanium, as well as to determine the binding energy of biexcitons. Some preliminary results were published in previous articles by the authors. Experiments were performed on samples of pure n- and p-type germanium with a total impurity carrier concentration on the order of $5 \cdot 10^{14} \text{ cm}^{-3}$. Two methods of excitation were used: varying power and voltage. Data were obtained at $T = 4.20 \text{ K}$ in a wide range of excitation level variations showing the dependence of the intensity of an exciton line with a quantum energy $h\nu = 0.713 \text{ eV}$ on the intensity of a biexciton line with $h\nu = 0.703 \text{ eV}$. A quadratic

1/2

USSR

ASNIN, V. M., et al., Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 62, No 2, Feb 72, pp 737-745

dependence is observed up to concentrations $n_0 \approx 3 \cdot 10^{14} \text{ cm}^{-3}$, while at higher excitation levels there is a linear dependence, which can be explained by the effect of nonequilibrium phonons produced when the excitons are bound into biexcitons. The energies E_b (dissociation energy of an exciton molecule) and ΔE ("acoustic" energy which a biexciton receives during phonon emission) were found to be 3.6-3.8 Mev and 2.0-2.2 Mev respectively. The energy of the phonon produced during formation of the biexciton is 1.6 Mev. The experimental results prove the biexciton nature of the 0.708 ev line in germanium. Regarding the shape of this line and its energy position, it is suggested that there is a recombination process in which annihilation of one exciton is accompanied by acceleration of another as a whole.

The authors thank L. V. KELDYSH and S. M. RYVKIN for a useful discussion of a number of questions touched upon in the article.

USSR

ASNIN, V. M. and BOGACHEV, A. A. (Physical-Technical Institute
imeni A. F. Ioffe, Academy of Sciences USSR)

"The Dielectric-Metal Transition in an Exciton System in
Germanium"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy
Fiziki (Letters to the Journal of Experimental and Theoretical
Physics), Vol 14, No 9, 5 Nov 71, pp 494-495

Abstract: An experimental study was carried out on the nature
of a small region in which conductivity is independent of tem-
perature and on exciton (electron-hole pair) concentrations in
germanium. This region appears immediately following the
transition into the metallic state and is observed only in
relatively impure samples. Samples having less than $2 \times 10^{12} \text{cm}^{-3}$
impurity did not exhibit this effect. Metallic con-
ductivity appears in relatively pure samples (impurity concen-
trations of 1 to $2 \times 10^{-16} \text{cm}^{-3}$), followed by conductivity
characteristic of degenerate electrons and holes. Conductivity
in pure samples is plotted as a function of electron-hole pair
1/2

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USSR

ASNIN, V. M. et al, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 14, No 9, 5 Nov 71, pp 494-495

concentration at 4.2 and 2.5°K. Conductivity is unstable near the metallic transition point even when the excitation light pulses were held within 1%. It is concluded that the metal-dielectric transition at helium temperatures is a first-order phase transition.

Orig. art. has 1 fig. and 5 refs.

2/2

1/2 028 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--GIANT FLUCTUATIONS OF PHOTOCURRENT IN GERMANIUM -U-
AUTHOR--(03)-ROGACHEV, A.A., SABLINA, N.I., ASNIN, V.M.
COUNTRY OF INFO--USSR
SOURCE--JETP LETTERS (USA), VOL. 11, NO. 3, P. 162-5 (FEB. 1970)
DATE PUBLISHED----FEB70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--GERMANIUM DIODE, PHOTO EMF, CURRENT DENSITY, EXCITON, HEAT OF
SUBLIMATION, CARRIER DENSITY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3005/1783 STEP NO--US/0000/70/011/003/0162/0165
CIRC ACCESSION NO--AP0133688
UNCLASSIFIED

2/2 028

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0133688

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PRESENTS SOME RESULTS OF AN EXPERIMENTAL STUDY OF PHOTOCURRENT FLUCTUATIONS IN A GERMANIUM P-I-N DIODE UNDER CONDITIONS WHEN THE EXISTENCE OF AN EXCITON CONDENSATE IS EXPECTED. IT IS SHOWN THAT THESE CONDITIONS EXIST WHEN THE DENSITY OF THE EXCITON GAS IS CLOSE ENOUGH TO THE DENSITY OF THE PARTICLES IN THE LIQUID PHASE, AND THAT THE HEAT OF SUBLIMATION IS CLOSE TO 1 MEV. (10 REFS.).

FACILITY: USSR ACAD. SCIS.

UNCLASSIFIED

1/2 023 UNCLASSIFIED
TITLE--BIEXCITONS IN GERMANIUM -U- PROCESSING DATE--30OCT70
AUTHOR--(03)-ASNIN, V.M., ROGACHEV, A.A., SABLINA, N.I.
COUNTRY OF INFO--USSR
SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(4), 808-11
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, PHYSICS
TOPIC TAGS--GERMANIUM, METAL SINGLE CRYSTAL, PHONON, EXCITON
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1998/0929 STEP NO--UR/0449/70/004/004/0808/0811
CIRC ACCESSION NO--AP0121531
UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0121531

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE KINETICS OF ESTABLISHING AN EQUIL. BETWEEN EXCITONS AND BIEXCITONS IN PURE GE SINGLE CRYSTALS WAS STUDIED EXPTL. NONEQUIL. CARRIERS WERE GENERATED BY LIGHT PULSES WITH DURATION OF 1.5 MUSEC; THE CARRIER LIFETIME WITH RESPECT TO INTERBAND RECOMBINATION WAS 20-60 MUSEC. THE CARRIER CONC. WAS CONTROLLED BY CHANGING EITHER THE INTENSITY OF GENERATION OR THE DELAY BETWEEN THE PULSE AND THE MOMENT OF MEASURING THE RECOMBINATION RADIATION. IN THE WHOLE CONC. REGION, THE RELATION N_{SUBB} SIMILAR TO N_{SUBEX} PRIME² WAS ESTABLISHED, WHERE N_{SUBB} AND N_{SUBEX} STAND FOR BIEXCITON AND EXCITON CONCNS., RESP. WITH INCREASING PULSE MEASUREMENT DELAY, THE INTENSITY OF THE 0.713-EV EXCITON LINE INCREASES, BUT THAT OF THE 0.709-EV BIEXCITON LINE REMAINS UNALTERED. THE RESULTS ARE EXPLAINED BY ASSUMING THAT NONEQUIL. PHONONS GENERATED TOGETHER WITH BIEXCITONS SHIFT THE EQUIL., AND THE GENERATION OF FREE EXCITONS IS PREFERRED.

FACILITY: FIZ. TEKH. INST. IM. IOFFE, LENINGRAD, USSR.

UNCLASSIFIED

Crystals & Semiconductors

USSR

ASNIN, V. M., ROGACHEV, A. A. and SABLINA, N. I., Physicotechnical Institute
 imeni A. F. Ioffe, Academy of Sciences USSR

"Giant Photocurrent Fluctuations in Germanium"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fizika, Vol. 11,
 No. 3, 5 Feb 70, pp 162-165

Abstract: An experimental study of photocurrent fluctuations in a germanium $p = i = n$ diode was conducted under conditions in which an exciton condensate should exist. The idea was that droplets of exciton concentrate, if they exist, will be attracted by the inhomogeneous electric field to the pn-junction and will yield a current pulse upon being destroyed in the junction. By measuring the charge occurring during this pulse, one can determine the number of excitons in a droplet and hence the dimensions of the droplets by using data on the density of the condensate. Measurements conducted at $T \leq 4.20K$ showed that after the creation of excitons with a concentration greater than $2-3 \cdot 10^{15} \text{ cm}^{-3}$ in a region fairly close to the pn-junction, the shape of the current pulse flowing through the pn-junction became irregular. Two types of fluctuations were observed: long fluctuations several microseconds in length and short fluctuations about 0.1 usec in length. The amplitude of these fluctuations at maximum excitation levels of $\sim 5 \cdot 10^{15} \text{ cm}^{-3}$ reached values of the order of several

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USSR

ASNIN, V. M., ET AL, Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki,
Vol. 11, No. 3, 5 Feb 70, pp 162-165

milliampere meters, corresponding to a charge of 10^{-3} - 10^{-10} coul. passing through the pn-junction. Fluctuations of this magnitude are explained by entry of droplets of exciton concentrate into the pn-junction field. The magnitude and length of the fluctuations quickly dropped as the excitation level or the distance of the excitation region from the pn junction decreased. This is attributed to the rapid decrease in the size of the droplets entering the region of the pn junction. It is concluded that the results verify the hypothesis that a condensate arises in germanium under conditions in which the density of the exciton gas is sufficiently close to the density of particles in the liquid phase and that the heat of sublimation is close to 1 Mev.

2/2

UNCLASSIFIED

PROCESSING DATE--03JUL70

TITLE--GIANT FLUCTUATIONS OF A PHOTOCURRENT IN GERMANIUM -U-

AUTHOR--ASNIN, V.M., REGACHEV, A.A., SABLINA, N.I.

COUNTRY OF INFO--USSR

SOURCE--FISMA ZH. EKSP. TEOR. FIZ. 1970, 11(3), 162-5

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--GERMANIUM, PN JUNCTION, PHOTOELECTRIC EFFECT, ELECTRIC CURRENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PRECEDENCE REEL/FRAME--1979/1066

STEP NO--UR/C356/70/011/003/0162/0165

CIRC ACCESSION NO--APOC47507

UNCLASSIFIED

18
5
23

ACC. NR:

AP0047507

Abstracting Service:

CHEMICAL ABST. 5/70

Ref. Code:

UR 0886

105120d Giant fluctuations of a photocurrent in germanium.
Asnin, V. M.; Rogachev, A. A.; Sablina, N. I. (Fiz.-Tekh. Inst.
im. Lofe, Leningrad, USSR). *Pis'ma Zh. Eksp. Teor. Fiz.* 1970,
11(3), 162-5 (Russ). A 1 sq. cm $p-i-n$ diode was connected to
the 10-mm side of a $10 \times 40 \times 1$ mm Ge plate. Photocurrent
signals due to the appearance of free current carriers at the $p-n$
junction were recorded. At $\leq 4.2^\circ\text{K}$ excitons with a concn. of
(2-3) $\times 10^{15}/\text{cm}^3$ gave an irregular pulsed current. The fluctu-
ations varied from several μsec to 0.1 μsec and the amplitude was
of the order of several mA, which corresponded to a change of
 10^{-4} - 10^{-10} Coulomb passing through the $p-n$ junction. The re-
sults confirmed previous conclusions [Asnin, *et al.* (1969)] that a
condensate in Ge occurs when the d. of the exciton gas had a d.
close to the d. of particles in the liq. phase and that the heat of
sublimation is close to 1 mev. The fluctuations were attributed
to the entrance of "drops" of the exciton condensate into the $p-n$
junction field.

GBJR

REEL/FRADE

19791066

18A+

USSR

UDC 621.373.531

R
LIVSHITS, A. L., ROGACHEV, I. S., OTTO, M. SH.

Generatovy impulsy (Pulse Generators), Moscow, Energiya Press, 1970, 224 pp
(from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9G240K)

Translation: A classification and description of the operating principles and methods of calculating strong current pulse generating systems used basically in electrophysical and to a lesser degree in electrochemical machine tools are presented. The book is designed for engineering-technical and scientific workers, graduate students and students dealing with the problems of strong current pulse engineering as applied to new methods of dimensional embossing.

1/1

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1/2 034
TITLE--ROTATION OF THE POLARIZATION PLANE DUE TO INTERACTING WAVES IN THE
3.39 MU RANGE -U-
AUTHOR--(02)-BERSHTEYN, I.L., ROGACHEV, V.A. *R*
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., RADIOFIZ. 1970, 13(1), 33-6
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--DISCHARGE TUBE, ROTATION, LIGHT POLARIZATION, ELECTROMAGNETIC
INTERACTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1987/0167
CIRC ACCESSION NO--AT0103846
STEP NO--UR/0141/70/013/001/0033/0036
UNCLASSIFIED

2/2 034

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AT0103846

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ROTATION WAS INVESTIGATED OF THE POLARIZATION PLANE IN THE 3.39 ME RANGE, BECAUSE OF INTERACTING WAVES, DURING PROPAGATION IN A DISCHARGE TUBE CONTG. A HE-NE MIXT. THE ROTATION WAS SIMILAR TO 1.5DEGREES. FACILITY: NAUCH.-ISSLED. RADIOFIZ. INST., GOR'K. UNIV., GORKI, USSR.

UNCLASSIFIED

AA0044796- .. Rogachev, V.S.

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent.

243211 MEASURING THE MAGNETIC SPECTRUM OF PARAMAGNETIC CRYSTALS with improved accuracy of

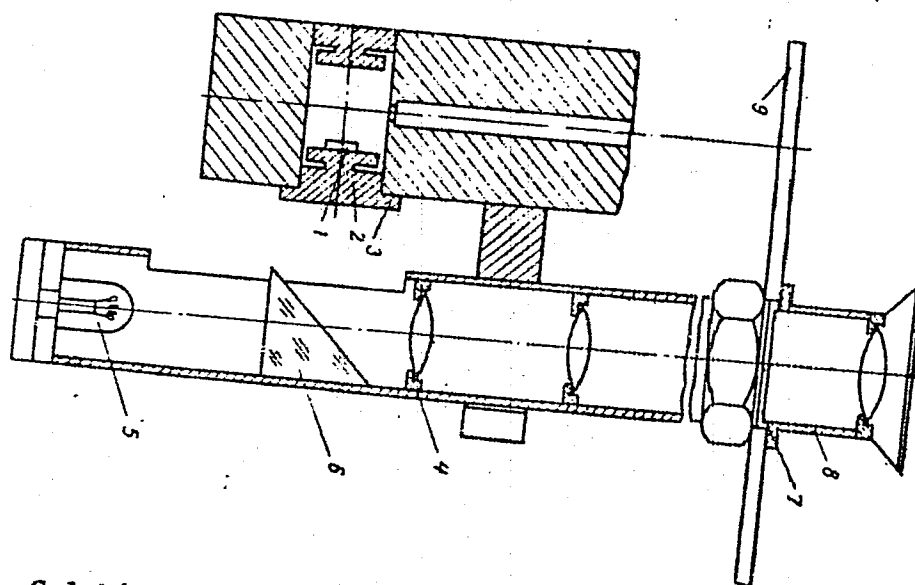
2/70

measurement uses the construction shown. The crystal 1 is mounted with adhesive to the piston 2 of a cylindrical resonator, rotated by any suitable mechanism round the horizontal axis. In a line with the cover of the piston, 3 is rigidly fixed an optical tube (for example, from a type RVP-463 surface frequency measuring device). By lamp 5 an image of the element 3 is reflected by mirror 6 through the optical system of 4 on to the object glass 7 of eyepiece 8. 3 and 7 are engraved with gratitudes. 7 is fastened to an angular measuring device, for example a ST-3 angle plate of a general-purpose microscope, having an error of not more than 15". By comparison of the gratitudes the true angle of rotation of 3 and 1 is measured. The crystal is orientated in the horizontal plane by rotating the whole apparatus, connected to a second goniometer, for which the angle plate ST-3 may also be used.
11.8.66 as 1097241/26-25.YU.K.GOLUB' et alia.
(15.9.69.) Bul 16/5.5.69. Class 42h.Int.Cl.A 01k.

21

19771623

AA0044796



AUTHORS: Golub', Yu. K.; Grigor'yev, N. I.; Gur'yanov, V. G.;
Rogachev, V. S.

19771624

8c

USSR

UDC: 531.1

KLIMOV, D.M., ROGACHEVA, L.N. and FILIPPOV, V.A., Moscow

"Resonant Regimes of Gimbal -Mounted Gyroscope"

Moscow, Izvestiya Akademii Nauk SSSR, Mekhanika Tverdogo Tela, No 4,
Jul/Aug 72, pp 3-14

Abstract: The motion of a balanced gyroscope, gimbal mounted on a fixed base, is analyzed. The equations of motion are set up. The solutions are obtained for the case of no excitation and for the case of a small cyclic moment acting on the inner ring. It is shown that with no excitation the inner ring may oscillate or rotate depending on the initial conditions. The amplitudes of oscillation and the speed of rotation as a function of exciting frequency are given. The stability of resonant regimes, including the case of zero friction of the gimbals, is investigated. Graphs of resonant frequency for several values of friction coefficient are presented.

1/1

Radiobiology

USSR

UDC 617-001.28-06:616.441-089.87)-092.9-089:616.419-089.843

CHERTKOV, I. L., Professor, NEMENOVA, N. M., Professor, NOVIKOVA, M. N.,
KOTLYAROV, A. M., MALANINA, V. N., UDALOV, G. A., ROGACHEVA, L. S., and
SHEPSHELEVICH, L. I., Laboratory of Myelo-Hemotherapy of Acute Radiation
Sickness, Pathological Anatomy Laboratory, and Cytological Laboratory,
Central Institute of Hematology and Blood Transfusion, USSR Ministry of
Health, Moscow

"Transplantation of Allogeneous Bone Marrow to Thymectomized Irradiated
Monkeys"

Moscow, Problemy Gematologii i Perelivaniya Krovi, Vol 16, No 3, Mar 71,
pp 45-53

Abstract: Since transplantation of allogeneous bone marrow to irradiated
animals for the purpose of alleviating radiation sickness gives rise to
a secondary disease due to differentiation of the transplanted tissue into
lymphocytes which enter into an immunological reaction with the host, a
study was performed in which thymectomized monkeys were irradiated with
800-1,000 r and then given allogeneous bone marrow transplants. The thymec-
tomy did not prevent the development of the secondary disease, but made it
1/2

1/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--PREPARATION OF GAS TURBINE FUELS OF IMPROVED QUALITY FROM
DISTILLATES FROM COKING PETROLEUM RESIDUES AT HIGH PRESSURE -U-
AUTHOR-(05)-ROGACHEVA, O.I., SYUNYAYEV, Z.I., GIMAYEV, R.N., DAVYDOV,
G.F., ZORIN, V.I.
COUNTRY OF INFO--USSR
SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (2), 6-8
DATE PUBLISHED-----70

SUBJECT AREAS--PROPULSION AND FUELS, MATERIALS
TOPIC TAGS--COKE, PETROLEUM PRODUCT, VANADIUM, SULFUR, KEROSINE, GAS
TURBINE FUEL, INDUSTRIAL PRODUCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/1519

STEP NO--UR/0318/70/000/002/0006/0008

CIRC ACCESSION NO--AP0118506
UNCLASSIFIED

USSR

CHERTKOV, I. L., et al., Problemy Gematologii i Perelivaniya Krovi, Vol 16,
No 3, Mar 71, pp 45-53

considerably milder and promoted regeneration of hematopoiesis of the
donor type. Histological examinations indicated that bone marrow stem
cells play an important role in the development of the secondary disease.

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/2 019

CIRC ACCESSION NO--AP0118506

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE KEROSENE GAS OIL DISTILLATES WERE IMPROVED WHEN DELAYED COKING WAS CARRIED OUT AT 6 ATM. FUELS CONTG. 0.0004PERCENT ASH AND 0.000072PERCENT V WERE THUS OBTAINED EVEN WITH COKING INTAKE STOCK FROM HIGH S PETROLEUMS. THE YIELDS OF COKE WERE ALSO INCREASED 6-9PERCENT. CHARACTERISTICS OF THE RESIDUES AND FUELS OBTAINED AND EXPTL. DATA ARE PRESENTED. 7 REFERENCES.

FACILITY: UFIH. NEFT. INST., UFA, USSR.

UNCLASSIFIED

UDC 617-001.28-036.11-092.9-035.272.6:547.963.32

USSR

ROGACHEVA, S. A., INZANOVA, O. V., KLYZHUK, K. N., RUSINOVA, G. G., SHAROVA, E. G.,
and LIBINZON, R. Ye., Institute of Biophysics, Ministry of Health USSR, Moscow

"The Therapeutic Effectiveness of High-Polymer Heterologous DNA in Dogs with Acute
Radiation Sickness"

Moscow, Meditsinskaya Radiologiya, Vol 15, No 3, 1970, pp 44-48

Abstract: A study was made of the effect of high-polymer, heterologous, calf thymus DNA preparations on the course and outcome of acute radiation sickness in dogs. In the experiments, 52 dogs of both sexes, one to four years old, weighing 5-24 kilograms, were subjected to cesium-137 gamma-ray irradiation at a rate of 6 r per minute in doses of 700 and 750 r. The animals were divided into four groups: group one received injections of DNA 30-60 minutes after irradiation, groups two and three received injections 24 and 72 hours after irradiation, respectively, and group four served as the control. The animals were distributed evenly among the groups by sex, weight and initial peripheral blood index. The therapeutic effect was evaluated according to 60-day survival, the average life of nonsurvivors, the clinical picture of acute radiation sickness, and the results of peripheral blood studies. Results of the investigations revealed that intravenous administration of calf thymus DNA increased survival in all experimental groups. Of the 18

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USSR

ROGACHEVA, S. A., et al., Meditsinskaya Radiologiya, Vol 15, No 3, 1970, pp 44-48

dogs in the control group, only two (11%) survived, while four of the 12 dogs in group one survived, eight of 11 dogs survived in group two, and six of 11 dogs survived in group three. These results indicate that the optimum time of DNA administration is 24 hours after irradiation. It was determined that the therapeutic effect of DNA, introduced intravenously, depended on the period between irradiation and injection of the preparation.

1/2 032 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--THE THERAPEUTIC EFFICACY OF HIGH POLYMER HETEROLOGOUS DNA IN DOGS
WITH ACUTE RADIATION SICKNESS -U-
AUTHOR--ROGACHEVA, S.A., LUZANOVA, O.V., KLYZHUK, K.N., RUSINOVA, G.G.,
SHAROVA, E.G.
COUNTRY OF INFO--USSR
SOURCE--MEDITSINSKAYA RADIOLOGIYA, 1970, VOL 15, NR 3, PP 44-49
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--DOG, RADIATION SICKNESS, DNA, CESIUM ISOTOPE, RADIATION
SOURCE, THYMUS GLAND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1985/1693 STEP NO--UR/0241/70/015/003/0044/0049
CIRC ACCESSION NO--AP0101748
UNCLASSIFIED

2/2 032

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0101748

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN EXPERIMENTS ON 52 DOGS IRRADIATED FROM A¹³⁷CS PRIME137 SOURCE (6 R-MIN) IN DOSES OF 730 AND 750 R. THE AUTHORS DEMONSTRATE THE THERAPEUTIC EFFECTIVENESS OF HIGH POLYMER HETEROLOGOUS DNA OF CALF THYMUS. DNA PREPARATIONS WERE OBTAINED BY THE METHOD OF KAY ET AL. THE THERAPEUTIC EFFECT OF DNA, INTRODUCED INTRAVENOUSLY IN A DOSE OF 15 MG-KG OF BODY WEIGHT, DEPENDED UPON THE TERM BETWEEN IRRADIATION AND INJECTION OF THE PREPARATION. THE GREATEST SURVIVAL (8 OUT OF 11 DOGS) WAS NOTED WHEN THE PREPARATION WAS INTRODUCED 24 HOURS AFTER IRRADIATION. IN DNA INJECTION 3 DAYS OR 30-60 MINUTES AFTER IRRADIATION THE SURVIVAL WAS 6 OUT OF 11 AND 4 OUT OF 12 ANIMALS RESPECTIVELY. IN THE CONTROL GROUP 2 OUT OF 18 DOGS SURVIVED. THE AUTHORS DISCUSS THE RELATIONSHIP BETWEEN THE THERAPEUTIC EFFECT AND TERM OF DNA INJECTION AFTER IRRADIATION.

UNCLASSIFIED

1/2 035 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--ELECTRON MICROSCOPIC STUDY OF THE INTERACTION OF OPPOSITELY CHARGED
POLYELECTROLYTES IN SOLUTIONS -U-
AUTHOR-(03)-ROGACHEVA, V.B., MIRLINA, S.YA., KARGIN, V.A.
COUNTRY OF INFO--USSR
SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(5), 340-3
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ELECTROLYTE, ELECTRON MICROSCOPY, POLYMER, ACRYLIC ACID, VINYL
COMPOUND, PYRIDINE, BROMINATED ORGANIC COMPOUND, POLYMER STRUCTURE,
STYRENE, SULFONIC ACID
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3007/0990 STEP NO--UR/0460/70/012/005/0340/0343
CIRC ACCESSION NO--AP0136420

2/2 035

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136420

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A REACTION OF POLY(ACRYLIC ACID) (I) WITH POLY (4,VINYL,1,ETHYLPYRIDINIUM BROMIDE) IN AQ. SOLNS. GAVE GLOBULAR STRUCTURES, WHEREAS IN AQ. SOLNS. CONTG. ETOH OR DMF, CROSSLINKED FIBRILLAR STRUCTURES WERE FORMED. NEUTRALIZAION OF POLY (4,VINYL,1,BENZYLPIYRIDINIUM HYDROXIDE) WITH I OR POLY(STYRENESULFONIC ACID) AFFORDED ELONGATED UNITS COMPOSED OF A LARGE NO. OF MACROMOLS, BUT HAVING NO DEFINITE STRUCTURE. FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--100 OPERATIONS OF RETROSTERNAL PREFASCIAL ESOPHAGOPLASTY WITH THE
SMALL INTESTINE IN CICATRICIAL ESOPHAGEAL OBSTRUCTION -U-
AUTHOR-(02)-ROGACHEVA, V.S., FUMIN, P.D.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK KHIRURGII IMENI I. I. GREKOVA, 1970, VOL 104, NR 5, PP
19-23
DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PLASTIC SURGERY, SMALL INTESTINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1021

STEP NO--UK/0589/70/104/005/0019/0023

CIRC ACCESSION NO--AP0109172

UNCLASSIFIED